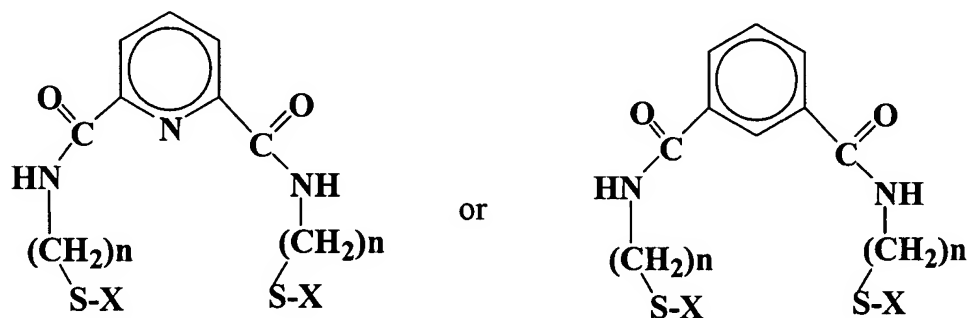


### Abstract of the Disclosure

Methods for preventing dissolution of solid substrates, such as metal leaching from coal or corrosion of metal surfaces, are provided. The method comprises coating the solid substrate with a chelate ligand having the general structure:



where  $n$  is an integer from 1-4, and  $X$  is selected from the group consisting of hydrogen, lithium, sodium, potassium, rubidium, cesium, and francium.

A method for preventing metal leaching from coal, such as acid mine drainage or metal leachate in runoff from coal refuse piles, is also provided.